

## Generate Collection

Nov 17, 1983

Cellulose-based fibres containing, as a mineral filler, barium sulphate, talcum, muscovite, or a mixture thereof, in an amount of from 15 to 60%, based on the total weight of the fibres, and, optionally in addition of hydrophobic, polymeric or oligomeric substance in an amount of from 1 to 60%, based on the total weight of the fibres.

## Generate Collection

Search Results - Record(s) 1 through 2 of 2 returned.

- ☐
1. Document ID: US 6200354 B1 Relevance Rank: 90

L6: Entry 2 of 2

File: USPT

Mar 13, 2001

US-PAT-NO: 6200354


DOCUMENT-IDENTIFIER: US 6200354 B1

TITLE: Dyeing of textiles

DATE-ISSUED: March 13, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Collins; Geoffrey William	Greasby	N/A	N/A		GBX
Burkinshaw; Stephen Martin	Collingham	N/A	N/A		GBX
Gordon; Roy	Middlesbrough	N/A	N/A		GBX

US-CL-CURRENT: 8/554; 8/555, 8/556, 8/606, 8/685, 8/686, 8/918,  
8/920, 8/921, 8/930

## ABSTRACT:

A method of dyeing cellulosic fibers or fabrics using pre-metallized acid dye by pretreating the fabric with a cationic agent having a plurality of cationic centers and optionally after treating the dyed material with a cationic polymer is disclosed. The cationic polymer is desirably a polyquaternary amine material especially a poly(DADMAC) or polyvinylpyridine. Material dyed by the method has a "washed out" appearance similar to fabrics dyed using the "Jarofast" process, but the availability of a wide range of pre-metallized dyes gives a wider color range, and the method enables a wider range of substrates to be dyed successfully, including lyocell fiber materials e.g. those sold under Courtauld's trademark "Tencel" and blend/union materials with polyamides, easier processing and superior wash and light fastness.

11 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 6258304 B1 Relevance Rank: 76

L6: Entry 1 of 2

File: USPT

Jul 10, 2001

US-PAT-NO: 6258304

DOCUMENT-IDENTIFIER: US 6258304 B1

TITLE: Process of making lyocell fibre or film

DATE-ISSUED: July 10, 2001


INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bahia; Hardev Singh	Coventry	N/A	N/A	GBX

US-CL-CURRENT: 264/41; 264/171.1, 264/172.13, 264/187, 264/203, 264/211.16, 264/49

ABSTRACT:

Lyocell fibres contain elongated domains of polyester, polyamide or an olefin copolymer, the domains having an aspect ratio at least 1.5 and being aligned substantially parallel to the axis of the fibre. A process for the preparation of lyocell fibre or film by extruding a solution of cellulose in amine oxide through a spinneret or film die at elevated temperature via an air gap into an aqueous precipitation bath is characterised in that 0.1 to 60 wt % based on cellulose of a thermoplastic low-melting polymer is incorporated into the cellulose solution. A process for the preparation of a bicomponent fibre by extruding two polymers through a spinneret in side-by-side relationship at elevated temperature is characterised in that one of the polymers is a solution of cellulose in amine oxide and the other polymer is a molten thermoplastic polymer having a melting point above 25.degree. C. but below the extrusion temperature.



9 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Desc	Image
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14 and 15	2

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Search Results - Record(s) 1 through 3 of 3 returned.

- ☒ 1. Document ID: US 6200354 B1 Relevance Rank: 90

L9: Entry 2 of 3 File: USPT Mar 13, 2001  
US-PAT-NO: 6200354  
DOCUMENT-IDENTIFIER: US 6200354 B1

TITLE: Dyeing of textiles

DATE-ISSUED: March 13, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Collins; Geoffrey William	Greasby	N/A	N/A		GBX
Burkinshaw; Stephen Martin	Collingham	N/A	N/A		GBX
Gordon; Roy	Middlesbrough	N/A	N/A		GBX

US-CL-CURRENT: 8/554; 8/555, 8/556, 8/606, 8/685, 8/686, 8/918,  
8/920, 8/921, 8/930

## ABSTRACT:

A method of dyeing cellulosic fibers or fabrics using pre-metallized acid dye by pretreating the fabric with a cationic agent having a plurality of cationic centers and optionally after treating the dyed material with a cationic polymer is disclosed. The cationic polymer is desirably a polyquaternary amine material especially a poly(DADMAC) or polyvinylpyridine. Material dyed by the method has a "washed out" appearance similar to fabrics dyed using the "Jarofast" process, but the availability of a wide range of pre-metallized dyes gives a wider color range, and the method enables a wider range of substrates to be dyed successfully, including lyocell fiber materials e.g. those sold under Courtauld's trademark "Tencel" and blend/union materials with polyamides, easier processing and superior wash and light fastness.

11 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☒ 2. Document ID: US 5733826 A Relevance Rank: 76

L9: Entry 3 of 3

File: USPT

Mar 31, 1998

US-PAT-NO: 5733826

DOCUMENT-IDENTIFIER: US 5733826 A

TITLE: Inner sole for shoes and process for its manufacture

DATE-ISSUED: March 31, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Groitzsch; Dieter	Hirschberg	N/A	N/A	DEX

US-CL-CURRENT: 442/364; 156/148, 156/196, 156/84, 28/107,  
442/335, 442/405, 442/407, 442/416

ABSTRACT:

An insole for shoes is a three-dimensionally shaped laminate composed of two adhesive-free formed fabrics, the formed fabric on the foot side being thin and abrasion-resistant, and the thicker formed fabric forming the base material of the insole consisting of staple fibers, having a composition of 50-60% by weight of core/sheath-polyester/copolyester fibers with a melting range of the core component of 255.degree.-260.degree. C. and of the sheath component of 110.degree.-140.degree. C., 5-15% by weight of high-shrinkage polyester fibers, and 25-40% by weight of absorbent fibers. The base material has a mass per unit area of 800-1200 g/m.sup.2 with a thickness of 0.70-0.85 cm. The insole is produced by shrinking the loosely needled base material by means of superheated water vapor, subsequently laminating the base material to an emboss-bonded and heated formed fabric by means of an adhesive compound, deep drawing of the laminate which was first heated above the melting range of the sheath component of the base material fibers inside an unheated molding press, and subsequently punching out the individual deep-drawn molded insoles.

5 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWC	Draw. Desc	Image
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☒ 3. Document ID: US 6258304 B1 Relevance Rank: 71

L9: Entry 1 of 3

File: USPT

Jul 10, 2001

US-PAT-NO: 6258304

DOCUMENT-IDENTIFIER: US 6258304 B1

TITLE: Process of making lyocell fibre or film

DATE-ISSUED: July 10, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bahia; Hardev Singh	Coventry	N/A	N/A	GBX

US-CL-CURRENT: 264/41; 264/171.1, 264/172.13, 264/187, 264/203,  
264/211.16, 264/49

ABSTRACT:

Lyocell fibres contain elongated domains of polyester, polyamide or an olefin copolymer, the domains having an aspect ratio at least 1.5 and being aligned substantially parallel to the axis of the fibre. A process for the preparation of lyocell fibre or film by extruding a solution of cellulose in amine oxide through a spinneret or film die at elevated temperature via an air gap into an aqueous precipitation bath is characterised in that 0.1 to 60 wt % based on cellulose of a thermoplastic low-melting polymer is incorporated into the cellulose solution. A process for the preparation of a bicomponent fibre by extruding two polymers through a spinneret in side-by-side relationship at elevated temperature is characterised in that one of the polymers is a solution of cellulose in amine oxide and the other polymer is a molten thermoplastic polymer having a melting point above 25.degree. C. but below the extrusion temperature.

9 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWC	Draw. Desc	Image
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Terms	Documents
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**Search Results - Record(s) 1 through 9 of 9 returned.**

- ☒ 1. Document ID: US 5094690 A      Relevance Rank: 52

L4: Entry 7 of 9

File: USPT

Mar 10, 1992

US-PAT-NO: 5094690

DOCUMENT-IDENTIFIER: US 5094690 A

TITLE: Process and arrangement for preparing a solution of cellulose

DATE-ISSUED: March 10, 1992

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zikeli; Stefan	Regau	N/A	N/A	ATX
Wolschner; Bernd	Vocklabruck	N/A	N/A	ATX
Eichinger; Dieter	Vocklabruck	N/A	N/A	ATX
Jurkovic; Raimund	Lenzing	N/A	N/A	ATX
Firgo; Heinrich	Vocklabruck	N/A	N/A	ATX

US-CL-CURRENT: 106/200.2; 106/173.01, 106/190.1

## ABSTRACT:

There is disclosed a process for preparing solutions of cellulose in aqueous tertiary amine oxides from a suspension of cellulose in an aqueous solution of the tertiary amine oxide by supplying heat at a reduced pressure. The suspension is transported over a heating surface, spread in layers or coats, until a homogenous solution of the cellulose has formed, which has a viscosity of between 50 and 15,000 Pas.s. Feeding of the suspension and drawing-off of the homogenous solution are carried out continuously. The solutions are prepared in an indirectly heated evacuable vessel provided with a stirring device. The vessel is designed as a cylindrical container including a centrally mounted stirring shaft having agitators joined thereto, the radial distance of the agitators from the internal wall of the container being 20 mm at the most. There are provided an intake for the cellulose suspension in the upper part of the container and an outlet for the homogenous cellulose solution in its lower end.

9 Claims, 2 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 1



**WEST****Generate Collection****Search Results - Record(s) 1 through 1 of 1 returned.**1. Document ID: JP 08170224 A Relevance Rank: 99

L19: Entry 1 of 1

File: DWPI

Jul 2, 1996

DERWENT-ACC-NO: 1996-358760

DERWENT-WEEK: 199636

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TITLE: Disperse dye-dyeable organic solvent series cellulose@  
fibre - comprising sea component of cellulosed polymer and  
island component of disperse dye-dyeable polymer.

PRIORITY-DATA: 1994JP-0316283 (December 20, 1994)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>JP 08170224 A</u>	July 2, 1996	N/A	007	D01F008/02

INT-CL. (IPC): D01D 5/06; D01D 5/36; D01F 1/06; D01F 8/02

ABSTRACTED-PUB-NO: JP08170224A

## BASIC-ABSTRACT:

An organic solvent series cellulose fibre is composed of an organic solvent series sea-island type cellulose in which the sea component consists of cellulose polymer and the island component consists of a disperse dye-dyeable polymer, Wt. ratio of the cellulose to the disperse dye-dyeable polymer is 98/2-55/54 and size of the island component is 0.01-3  $\mu\text{m}$  and dye fastness to washing is higher than 3 grades. Also claimed is an organic solvent series cellulose fibre in which the fibre has dye fastness to the disperse dye of more than 0.1 mg per 1 g of the fibre. Also claimed is an organic solvent series cellulose fibre in which wet strength of the fibre is more than 0.6 g/d. Also claimed is a process for mfg. an organic solvent series cellulose fibre which comprises spinning in dry and wet system an organic solvent soln. dissolving and dispersing cellulose and a disperse dye-dyeable polymer at a mixt. ratio of 98/2-55/45, at air-gap length of 0.5-10 cm, spinning draft of 3-30 times, into an aq. coagulating bath contg. organic solvent used for mfg. spinning soln. and water at a mixt. ratio of 10/90-60/40.

ADVANTAGE - The fibre can be dyed by a disperse dye in one dyeing bath at one colour shade.



**WEST**[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)**Search Results -**

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- JPO Abstracts Database
- EPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins ▼

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17 and 18 and 11

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USPT	lyocell and (fiber or fibre)	180	<u>L8</u>
USPT	polyethylene terephthalate and (fiber or fibre)	15696	<u>L7</u>
USPT	14 and 15	2	<u>L6</u>
USPT	polyethylene terephthalate and lyocell	21	<u>L5</u>
USPT	11 and 12 and 13	3946	<u>L4</u>
USPT	cellulosic and (fiber or fibre)	17052	<u>L3</u>
USPT	polyester and (fibre or fiber)	71541	<u>L2</u>
USPT	(nonwoven\$1 or non-woven\$1 or non adj woven\$1 or unwoven)	40703	<u>L1</u>

## Generate Collection

**Search Results - Record(s) 1 through 1 of 1 returned.**

1. Document ID: JP 10072771 A      Relevance Rank: 99

Mar 17, 1998

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TITLE: Soft feel cloth of mixed fibres of polyester/cellulose@  
- comprises lyocell fibre and polyester treated with alkali to  
give weight decrease

PRIORITY-DATA: 1996JP-0194054 (July 5, 1996)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 10072771 A	March 17, 1998	N/A	007	D06M011/38

INT-CL (IPC): D03D 15/00; D06M 11/38

ABSTRACTED-PUB-NO: JP10072771A

BASIC-ABSTRACT:

The cloth comprises mixed fibres of polyester and a lyocell fibre. Polyester is treated with alkali to give weight decrease.

ADVANTAGE - The cloth has soft feel driven from alkali weight decrease, sturdiness, toughness, etc. It has sufficient strength, dyefastness and no contamination of the cellulose fibre by dye for the polyester fibre.

Full	Title	CIT.1	REV.1	CLS.1	REF.1	DRAW.1

## Generate Collection

Terms	Documents
jp-10072771-\$.did.	1

Display 50 Documents, starting with Document: 1

## Generate Collection

Jul 2, 1996

TITLE: Disperse dye-dyeable organic solvent series cellulose@  
fibre - comprising sea component of cellulosed polymer and  
island component of disperse dye-dyeable polymer.

PRIORITY-DATA: 1994JP-0316283 (December 20, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 08170224 A	July 2, 1996	N/A	007	D01F008/02

INT-CL (IPC): D01D 5/06; D01D 5/36; D01F 1/06; D01F 8/02

ABSTRACTED-PUB-NO: JP08170224A  
BASIC-ABSTRACT:

An organic solvent series cellulose fibre is composed of an organic solvent series sea-island type cellulose in which the sea component consists of cellulose polymer and the island component consists of a disperse dye-dyeable polymer, Wt. ratio of the cellulose to the disperse dye-dyeable polymer is 98/2-55/54 and size of the island component is 0.01-3  $\mu$ m and dye fastness to washing is higher than 3 grades. Also claimed is an organic solvent series cellulose fibre in which the fibre has dye fastness to the disperse dye of more than 0.1 mg per 1 g of the fibre. Also claimed is an organic solvent series cellulose fibre in which wet strength of the fibre is more than 0.6 g/d. Also claimed is a process for mfg. an organic solvent series cellulose fibre which comprises spinning in dry and wet system an organic solvent soln. dissolving and dispersing cellulose and a disperse dye-dyeable polymer at a mixt. ratio of 98/2-55/45, at air-gap length of 0.5-10 cm, spinning draft of 3-30 times, into an aq. coagulating bath contg. organic solvent used for mfg. spinning soln. and water at a mixt. ratio of 10/90-60/40.

ADVANTAGE - The fibre can be dyed by a disperse dye in one dyeing bath at one colour shade.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMMC	Draw Desc	Image
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☐ 2. Document ID: US 4239792 A      Relevance Rank: 50

L4: Entry 9 of 9                                      File: USPT                                      Dec 16, 1980

US-PAT-NO: 4239792

DOCUMENT-IDENTIFIER: US 4239792 A

TITLE: Surface wiping device

DATE-ISSUED: December 16, 1980

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ludwa; Raymond J.	Fairfield	OH	N/A	N/A

US-CL-CURRENT: 428/198; 442/415

ABSTRACT:

Disposable devices useful for cleaning and wiping hard surfaces. The devices have a core interposed between and laminated to two outer layers. The core is preferably an absorbent paper web, while the outer layers are preferably apertured nonwoven fabrics having defined properties. The wiping device is strong, absorbent, and will retain sufficient water after manual wringing to clean soiled surfaces, and will leave the cleaned surface essentially dry.

10 Claims, 2 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KMMC	Draw Desc	Image
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☐ 3. Document ID: US 4246221 A      Relevance Rank: 50

L4: Entry 8 of 9                                      File: USPT                                      Jan 20, 1981

US-PAT-NO: 4246221

DOCUMENT-IDENTIFIER: US 4246221 A

TITLE: Process for shaped cellulose article prepared from a solution containing cellulose dissolved in a tertiary amine N-oxide solvent

DATE-ISSUED: January 20, 1981

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McCorsley, III; Clarence C.	Asheville	NC	N/A	N/A

US-CL-CURRENT: 264/203; 210/500.29, 264/208, 264/210.8, 536/56, 536/57

## ABSTRACT:

A solution containing cellulose dissolved in a tertiary amine N-oxide solvent containing a nonsolvent for cellulose such as water is shaped by extrusion or other shaping process to form a shaped cellulose fiber, rod, plate, tubing or film. The extruded shaped article is stretched in air while still a solution to impart improved physical properties thereto and the cellulose is precipitated from the shaped solution to set the properties without additional drawing. The solution may be prepared by dissolving cellulose in the tertiary amine N-oxide solvent in the barrel of an extrusion apparatus, extruding the solution, orienting by stretching the resulting product in air while still a solution and then precipitating the cellulose from the shaped article before significant degradation of the cellulose. The cellulose and tertiary amine N-oxide may be ground to substantially the same particle size before charging the extruder barrel. The tertiary amine N-oxide is recovered and recycled to avoid environmental pollution problems. The resulting cellulose fibers or films can be used to make fabrics, wrapping or packaging materials or nonwoven products.

6 Claims, 4 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference
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☐ 4. Document ID: US 5311389 A      Relevance Rank: 50

L4: Entry 6 of 9

File: USPT

May 10, 1994

US-PAT-NO: 5311389

DOCUMENT-IDENTIFIER: US 5311389 A

TITLE: Hydroentangled fabric diskette liner

DATE-ISSUED: May 10, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Howey; Jon A.	Mansfield	MA	N/A	N/A

US-CL-CURRENT: 360/133; 28/104, 442/152, 442/154, 442/155, 442/165, 442/408

ABSTRACT:

A nonwoven liner for a diskette cartridge is made of hydroentangled fibers and impregnated with a small amount of binder which is uniformly distributed throughout the fabric. The binder comprises no more than 5% by weight and preferably between 1.5-3.0% by weight of the fabric. The low concentration of binder ensures that the liner surface does not become totally coated with plastic film that reduces cleaning ability, while also providing improvements in tensile strength and debris reduction. The binder solution preferably has a high surface tension (low surfactant level), so that the binder becomes concentrated at the junction points of the fibers throughout the fabric. The low level of surfactant ensures a low risk of chemical attack of the disk media surface. The hydroentangled fabric cleans the disk media more efficiently, has less fiber debris, contains less environmental contaminants, is substantially loftier, and is cut with cleaner edges than standard thermally bonded diskette liners.

20 Claims, 7 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 5. Document ID: US 5421898 A Relevance Rank: 50

L4: Entry 5 of 9

File: USPT

Jun 6, 1995



US-PAT-NO: 5421898

DOCUMENT-IDENTIFIER: US 5421898 A

TITLE: Method and element for controlling release of a disinfectant from a substrate

DATE-ISSUED: June 6, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cavanagh; James W.	Ramsey	NJ	N/A	N/A

US-CL-CURRENT: 134/7; 134/22.19, 134/42, 134/6, 427/286, 427/288, 427/389.9, 442/123

ABSTRACT:

This present invention provides an element for controlling release of a quaternary disinfectant in aqueous solutions comprising a substrate coated with the residue of an aqueous composition of a water soluble polymer and a quaternary ammonium disinfectant characterized in that the water soluble polymer has weight average molecular weight of 85,000 to 186,000 and a degree of hydrolysis of 87 to 89 percent.

15 Claims, 3 Drawing figures Exemplary Claim Number: 1,15  
Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMIC	Draw Desc	Image
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☐ 6. Document ID: US 5475903 A Relevance Rank: 50

L4: Entry 4 of 9

File: USPT

Dec 19, 1995

US-PAT-NO: 5475903

DOCUMENT-IDENTIFIER: US 5475903 A

TITLE: Composite nonwoven fabric and method

DATE-ISSUED: December 19, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Collins; Loren M.	N. Myrtle Beach	SC	N/A	N/A

US-CL-CURRENT: 28/104; 162/115, 28/107, 28/112, 442/408

ABSTRACT:

A composite nonwoven fabric and method for making the same includes subjecting a carded web to the action of a cross lapper (B) and then drafting the cross-lapped web by passing the same through a web drafter (C) utilizing a series of wire wound rolls of progressively increased speed. A web of substantially unbonded polymeric fibers is layed from a roll (D) forming a composite web by hydroentanglement utilizing a series of spun bonding steps resulting in a composite web of substantial strength comparison in the machine direction and in cross direction and possessing the characteristics of fabric suitable for use in hospital applications such as surgical gowns.

7 Claims, 5 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw. Desc	Image
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☐ 7. Document ID: US 5623888 A      Relevance Rank: 50

L4: Entry 3 of 9

File: USPT

Apr 29, 1997

US-PAT-NO: 5623888

DOCUMENT-IDENTIFIER: US 5623888 A

TITLE: Bulky, stable nonwoven fabric

DATE-ISSUED: April 29, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zafiroglu; Dimitri P.	Greenville	DE	N/A	N/A

US-CL-CURRENT: 112/414; 112/475.04, 428/152

ABSTRACT:

A bulky, resilient, durable, dimensionally stable nonwoven fabric is prepared by (a) intermittently attaching contractible elements to a nonwoven fibrous layer, (b) contracting the elements to simultaneously gather the fibrous layer to 25-75% of its original area and form a series of waves or protuberances that project from the plane of the layer and then (c) stitchbonding the gathered fibrous layer with inextensible inelastic yarn. The fabrics are particularly useful for toweling, insulating layers, fire-resistant cloths, upholstery and the like.

9 Claims, 4 Drawing figures Exemplary Claim Number: 1  
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 8. Document ID: US 5733750 A      Relevance Rank: 50

L4: Entry 2 of 9

File: USPT

Mar 31, 1998

US-PAT-NO: 5733826

DOCUMENT-IDENTIFIER: US 5733826 A

TITLE: Inner sole for shoes and process for its manufacture

DATE-ISSUED: March 31, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Groitzsch; Dieter	Hirschberg	N/A	N/A	DEX

US-CL-CURRENT: 442/364; 156/148, 156/196, 156/84, 28/107, 442/335, 442/405, 442/407, 442/416

ABSTRACT:

An insole for shoes is a three-dimensionally shaped laminate composed of two adhesive-free formed fabrics, the formed fabric on the foot side being thin and abrasion-resistant, and the thicker formed fabric forming the base material of the insole consisting of staple fibers, having a composition of 50-60% by weight of core/sheath-polyester/copolyester fibers with a melting range of the core component of 255.degree.-260.degree. C. and of the sheath component of 110.degree.-140.degree. C., 5-15% by weight of high-shrinkage polyester fibers, and 25-40% by weight of absorbent fibers. The base material has a mass per unit area of 800-1200 g/m.sup.2 with a thickness of 0.70-0.85 cm. The insole is produced by shrinking the loosely needled base material by means of superheated water vapor, subsequently laminating the base material to an emboss-bonded and heated formed fabric by means of an adhesive compound, deep drawing of the laminate which was first heated above the melting range of the sheath component of the base material fibers inside an unheated molding press, and subsequently punching out the individual deep-drawn molded insoles.

5 Claims, 0 Drawing figures Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference
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